Catalogue of American Amphibians and Reptiles.

McCranie, J.R. and L.D. Wilson. 1993. *Leptophis modestus.*

Leptophis modestus (Günther)

Abaetulla modesta Günther, 1872:26. Type-locality, "on the banks of the Rio Chisoy [= Chixoy = Negro], below the town of Cubulco [Departamento Baja Verapaz, Guatemala]" (see Remarks). Holotype, British Museum (Natural History) BMNH 1946.1.21.50, a young adult male, likely collected by collectors for Osbert Salvin, date not given (not examined by authors).
P[hilothamnus]. modestus: Cope, 1886:279.
Leptophis modestus: Günther, 1894:129.

• **Content.** The species is monotypic.

• **Definition.** *Leptophis modestus* is a large member of the genus (males reaching 1785 mm TL). Scutellation is as follows: loreals 1-1 (rarely 2-2); preoculars 1-1; postoculars 2-2; nasal divided; supralabials 8-10 (usually 8), usually with 4th and 5th entering orbit when 8 present; infralabials 9-12 (usually 10); temporals usually 1+2-1+2 (sometimes anterior temporal is divided vertically on both sides); ventrals 168-178 in males, 173-183 in females, lacking lateral keels or well-developed notches; subcaudals 171-186 in males, 166-179 in females; anal plate divided; dorsal scale rows 15 (at midbody)-13-11, all keeled except outermost row on each side, lacking apical pits. Eye diameter less than distance from its anterior edge to nostril. Maxillary teeth (+ empty sockets) 23-28, last 3 strongly enlarged; tooth preceeding strongly enlarged teeth slightly enlarged (Hoyt, 1964).

"Hemipenis 8 subcaudals long, slightly bilobed, divided opposite distal half of eighth subcaudal; sulcus single; basal portion opposite subcaudals 1 to 3 with numerous spinules; no basal hooks; 4 transverse rows of small spines opposite subcaudal 4 and proximal third of subcaudal 5, basal row largest, size of spines decreasing distally; apical portion of organ with papillate calyces from subcaudal 5-7, papillae longest basally, decreasing in size distally, stiffened by internal spine; apex opposite subcaudal 8 with simple calyces" (Hoyt, 1964:214).

Color of LSUMZ 33571 shortly after death was as follows: dorsum of body uniform green; venter of body pale green; black postocular bar beginning on lower postocular, passing posteriorly along lower portion of anterior temporal and upper edge of supralabials 6 and 7 onto lower portion of lower posterior temporal and upper portion of supralabial 8. Another specimen (LSUMZ 38829) lacked the postocular stripe.

• **Diagnosis.** *Leptophis modestus* may be distinguished from the remaining members of the genus by the following combination of characters: loreal present; keels on all dorsal scale rows, except outermost row on each side; no apical pits on dorsal scales; ventral scales without any trace of lateral keels; dorsum without lateral dark stripes, except just posterior to head; hemipenis without basal hooks.

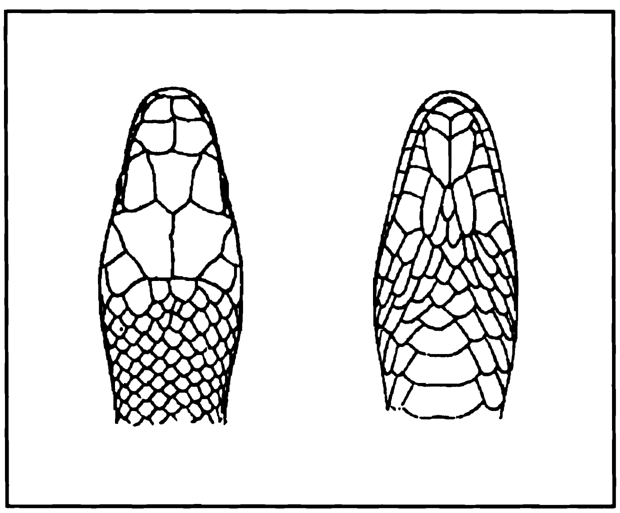
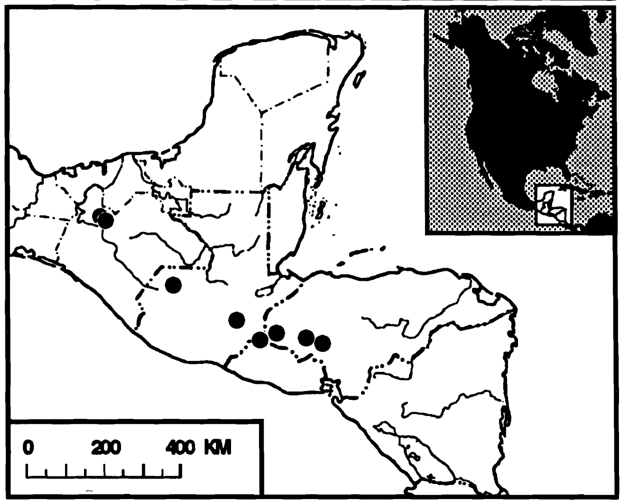


Figure. *Leptophis modestus* (from Günther, 1885-1902).



Map. Solid circles denote known collecting localities. The erroneous type locality is not mapped.

• **Descriptions.** Descriptions of scutellation and color pattern, although usually based upon a single specimen (except where noted) are found in Günther (1872, 1894), Boulenger (1894), Bocourt (1897), Werner (1903), Hoyt (1964; 10 specimens), Williams and Smith (1966), Mertens (1973; 3 specimens), Wilson et al. (1978, 1986), and Wilson and Meyer (1985). Hoyt (1964) also provided a description of the hemipenis and maxillary teeth configuration.

• **Illustrations.** Günther (1872, 1894) and Bocourt (1897) provided drawings of the species, and Alvarez del Toro (1983) included a color photograph.

• **Distribution.** *Leptophis modestus* occurs in disjunct montane regions from northwestern Chiapas, México, to southwestern Honduras from 1335-2590 m. Johnson (1989) recorded the species from montane rainforest and evergreen cloud forest vegetational formations in Chiapas, México, and Campbell (1982) reported it from hardwood cloud forest, *Liquidambar* forest, and humid pine-oak forest in the Sierra de las Minas of Guatemala. The Honduran and El Salvadorean specimens were taken from cloud forest areas (= Lower Montane Moist Forest formation of Holdridge, 1967).

• **Fossil Record.** None.

• **Pertinent Literature.** Hoyt (1964) resurrected *L. modestus* from the synonymy of *L. mexicanus* and provided a comparison of *modestus* with its congeners. Henderson (1976) provided data on SVL/mid-body circumference ratios in *modestus.* Mertens (1973) provided a key to distinguish *modestus* from the remaining species of *Leptophis*, and Wilson and Meyer (1985) a key to distinguish *modestus* from the remaining Honduran species. Smith and Smith (1976, 1993) and Villa et al. (1988) listed some of the important literature on the species. Alvarez del Toro (1983) used the common name Ranera de Niebla (= Cloud forest frog hunter) for *L. modestus.*

• **Nomenclatural History.** *Leptophis modestus* has been confused with two populations of *L. mexicanus* having uniform, or nearly uniform, dorsal surfaces. Oliver (1942:17) suggested that *modestus* "... was apparently based on a uniformly green specimen of *mexicanus,*" largely because of having examined uniformly green specimens of *mexicanus* from southern Tamaulipas, México. Oliver (1948) listed *modestus* in the synonymy of *mexicanus,* as did Smith and Taylor (1945), Stuart (1963), and Peters and Orejas-Miranda (1970). Hoyt (1964) demonstrated that *L. modestus* was a valid species distinct from *L. mexicanus.* Mertens (1971), apparently with the Tamaulipas population in mind, thought that two subspecies of *L. modestus* might exist, but later (Mertens, 1972) described the Tamaulipas population as *L. mexicanus septentrionalis.* Greene (1972) also listed part of the type series of *L. mexicanus septentrionalis* as *L. modestus.* Hoevers and Henderson (1974) recorded *L. modestus* from Belize based on three specimens with uniformly green dorsums,

but Henderson and Hoevers (1975) and Henderson (1976) allocated these specimens to *L. mexicanus*. Flores-Villela and Gerez (1988) also did not distinguish between *L. modestus* and some populations of *L. mexicanus*.

• **Remarks**. The type locality for *L. modestus* is undoubtedly erroneous. Cubulco is in a tributary basin of the Río Chixoy (= Negro). Selander and Vaurie (1962) gave 2900' (= 884 m) as the elevation of Cubulco, whereas a topographic map (Cobán, Guatemala, 1:250,000, Army Map Service, Corps of Engineers: ND 15-4) shows 1000 m as the elevation of Cubulco. At any rate, the portion of the Rio Negro Valley where the type of *L. modestus* was supposedly collected is at a lower elevation (elevations are between 700-900 m along the Río Negro "below" Cubulco, according to the map just cited) and supports subhumid vegetation (Stuart, 1954). All of the remaining known collecting localities for *L. modestus* are situated in humid forests (see Distribution) at higher elevations. Further evidence of erroneous locality data is that Günther (1885-1902) also recorded two other species, *Mesaspis moreleti* (as *Gerrhonotus*) and *Geophis rhodogaster* (as *G. chalybaea* var. I, C) from the "Rio Chisoy below the town of Cubulco." *Mesaspis moreleti* is known from 1400 to 4000 m (Campbell and Vannini, 1989) in humid pine-oak and cloud forests, and *G. rhodogaster* is known from 1500 to 2500 m, usually in pine-oak associations (Downs, 1967). Thus, Günther's locality data for each of these three species lies well below their respective known elevational ranges.

• **Etymology**. The specific name *modestus* is Latin meaning moderate. The reference is uncertain, but may be to the moderate eye size in this species, which was referred to by Günther (1872:26) as "... rather smaller than in the other species in this genus [*Abaetulla* = *Leptophis*]."

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James R. McCranie, 10770 SW 164th Street, Miami, FL 33157, and **Larry David Wilson**, Department of Biology, Miami-Dade Community College, Kendall Campus, Miami, FL 33176.

Primary editor for this account, Harold A. Dundee.